



b)

$$m = \frac{\Delta y}{\Delta x} = \frac{6 - (-1)}{-4 - 1} = \frac{5}{-5} = \boxed{-1}$$

c)

$$y - 1 = -1(x - 1)$$

$$\Rightarrow \boxed{y = -x + 2}$$

2.  $(4x+1)(x^2-1)e^{-9x} = 0$

if and only if  $4x+1=0$  or  $x^2-1=0$  or  $e^{-9x}=0$

I.  $4x+1 \Rightarrow x = -\frac{1}{4}$

II.  $x^2-1 \Rightarrow x=1$  or  $x=-1$

III.  $e^{-9x}=0$  has no solutions, because  $e^a > 0$  for all real numbers  $a$

So, the real numbers that solve the given equation

are  $\boxed{x = -\frac{1}{4}, x = -1 \text{ and } x = 1,}$